REMARKS

No claims have been amended. No new matter has been included. Claims 1-52 remain pending in this application.

Claims 1-16, 25-44 and 49-52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Proebsting (U.S. Patent No. 5,952,948) in view Akiyama et al. (U.S. Patent No. 6,201,523) ("Akiyama"). Claims 17-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Proebsting and Akiyama as applied to claims 2, 4, 10, and 12, and further in view of Jeong (U.S. Patent No. 6,335,721). Claims 21-24 and 45-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Proebsting and Akiyama as applied to claims 2, 4, 8, 10, and 41-44 in view of Nakamura et al. (U.S. Patent No. 6,411,273) ("Nakamura"). The rejections are respectfully traversed.

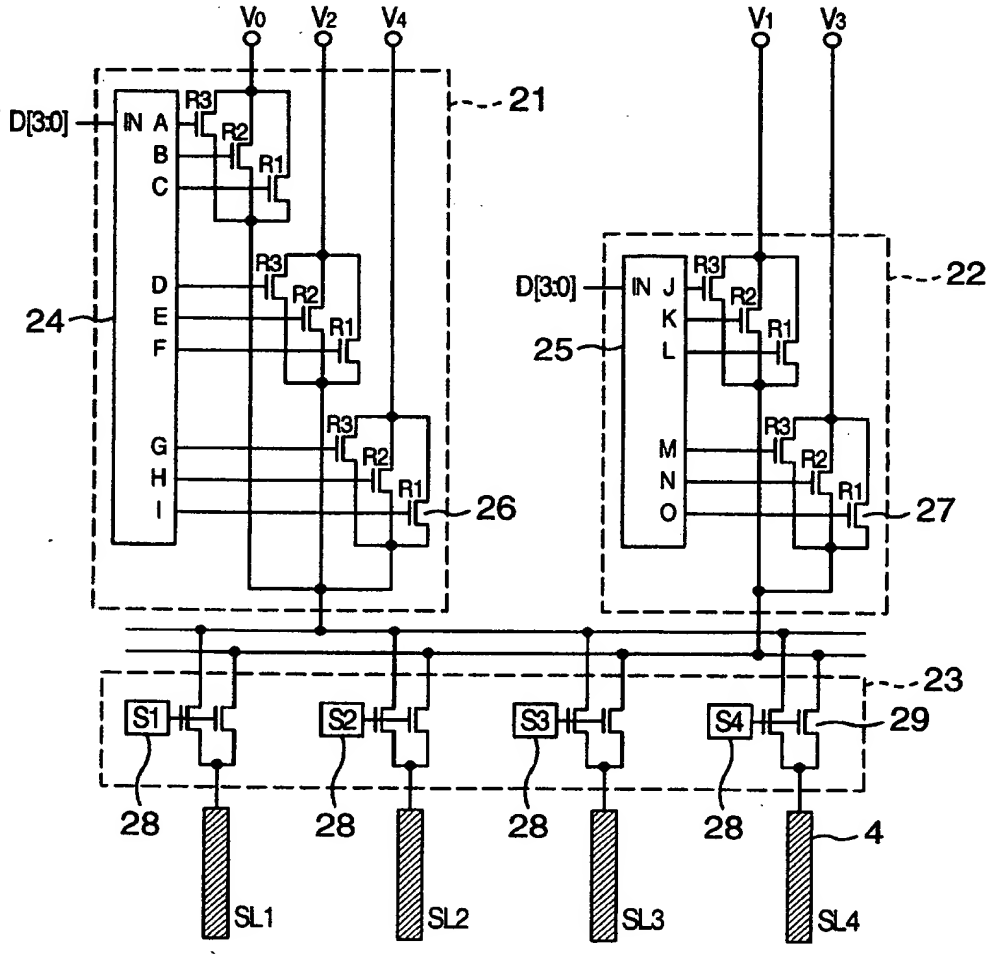
The claimed invention recites "a sampling circuit which selectively connects each output terminal of two of the digital-to-analog conversion circuits to signal lines." (Claim 1) The claimed invention further recites "the sampling circuit comprises a plurality of switches each of which has an approximate same resistance value" and "a divided voltage point of the selected reference voltages is generated by a series resistance comprising a resistance value of the valuable resistance circuit and a resistance value of switches constituting the sampling circuit," as recited in claim 1. Claims 2-4 and 9-12 recite similar limitations.

It would not have been obvious for one of ordinary skill in the art to combine the cited references to achieve the claimed invention. The claimed invention recites "a sampling circuit which selectively connects each output terminal of two of the digital-to-analog conversion circuits to signal lines." The circuit, as shown in FIG. 2 (below), has two functions. A first function is to generate a divisional voltage from two voltage

sources. Thereby, a large number of (divisional) voltages can be generated from a small number of voltage sources to be supplied.

A second function is to select one of a plurality of signal lines SL1-SL4 and then output a divisional voltage on the selected signal line. The selected one of the signal lines SL1-SL4 shifts along the time-axis to output a divisional voltage on the selected one signal line, so that a desired voltage on each of the plurality of signal lines SL1-SL4 can be generated. In addition, each of the signal lines SL1-SL4 provides pixels disposed in the form of a matrix with the voltage.

FIG. 2



The D/A converter disclosed by Proebsting may generate a greater number of divisional voltages (which are divided by using resisters of switches) than the number of supplied voltages and these divisional voltages may be able to be distributed into a plurality of signal lines by a sampling circuit disclosed by Akiyama. However, the claimed invention recites "a sampling circuit which selectively connects each output terminal of two of the digital-to-analog conversion circuits to signal lines." Proebsting and Akiyama teach no such limitation. In fact, the current path of the claimed invention, which is generated when a divisional voltage is generated from the two voltage sources, is distinct from the current path of Proebsting and Akiyama.

For example, in the case that a divisional voltage on a signal SL1 is generated in the FIG. 2 circuit, a current path for the divisional voltage will flow along the following path: first external power source V0, V2 or V4 – D/A converter 21 – Node – Any one of the pair of switches (TFTs) in the sampling circuit 23 – signal line SL1 – another one of the pair of TFTs in sampling circuit 23 – Node – D/A converter 22 – second external power source. Thus, in the circuit of FIG. 2, resistance elements (R1-R3) constituting a D/A converter and a resistance element (RSW) are utilized for dividing supplied voltage sources.

However, in a circuit comprising a combination of the D/A converter disclosed by Proebsting and a sampling circuit disclosed by Akiyama, the dividing of a voltage is implemented within the D/A converter. Thus, the resulting current will flow along the following path: first external power source – D/A converter – second external power source.

For at least these reasons, considering the combination of the cited references, the switch (TFT) formed by Proebsting and Akiyama constituting the sampling circuit is used merely for distribution and there is <u>not</u> a configuration for dividing voltages by

using resistance elements of the switch (TFT) constituting the sampling circuit of the claimed invention. Moreover, in the combination of the cited references, the current path for dividing voltages in the circuit does not include the switch constituting the sampling circuit and, by contrast, the current path forms a shortcut of the switch constituting the sample circuit.

In the claimed invention, the current path for dividing voltages comprises a switch constituting a sampling circuit and the resistance thereof is utilized for dividing voltages. Thus, a resistance value between "the first external power source" and "second external power source" becomes higher than the resistance value of the combination of the cited references. Therefore, because of the higher resistance value of the circuit of the claimed invention the current voltage amount flowing through the current path between "the first external power source" and "the second external power source" due to the dividing of the voltages is reduced. Additionally, due to the current voltage amount being reduced, the power consumption is also reduced within the circuit and the image display device.

Consequently, the claimed invention is nothing like the cited references if combined. Proebsting and Akiyama fail to disclose, teach or suggest all limitations of the claimed invention. Nor would it have been obvious to one of ordinary skill in the art to combine or modify the cited references to achieve the claimed invention. As demonstrated above, combining the cited references would result in something other than the claimed invention. Moreover, Jeong and Nakamura, additionally cited by the Office Action, do not satisfy the shortcomings of Proebsting and Akiyama. Applicants respectfully submit that claims 1-4 and 9-12 should be allowed. Claims 5-8, 13-16, 25-44 and 49-52 depend from claims 1-4 and 9-12 and are allowable along with claims 1-4 and 9-12.

Accordingly, Applicants respectfully submit that the rejections be withdrawn and the claims allowed.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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